Exercise – counted loops

Trace the following:

1.

```
for k in range (-1, 3):
        print( k + 2 )
```

OUTPUT	MEMORY (i.e. k)
-1 1 3	k=-1,1.3

2.

```
step =6
counter=10
for k in range (step, counter):
        print(k*k)
```

OUTPUT	MEMORY (i.e. k)
36 49 64 81	k=6,7,8,9 (6*6), (7*7), (8*8), (9*9).

3.

```
for countdown in range ( 5, 0, -1):
        print countdown, "seconds"
```

OUTPUT	MEMORY
5 seconds 4 seconds 3 seconds 2 seconds 1 seconds	countdown=5,4,3,2,1

4.

```
for x in range(-3 , 3):
        print("*")
```

OUTPUT	MEMORY
*	x=-3,-2,-1,0,1,2

5. Using a counted loop, write a program that prints the odd numbers from 5 to 103. Call your program YourFirstName_01.py

6. Write a program that will prompt for the number of times that you want to output the sentence "I am so smart!" and print that to the screen. Call your program YourFirstName_02.py

7. Write a program to Count backwards by 2's from 40 to 20 along with the sentence "The current number is: ".The current number is

SAMPLE OUTPUT
The current number is: 40 The current number is: 38 The current number is: 36 The current…..

Call your program YourFirstName_03.py

8. Use a *for* loop to prompt for and input 10 floats, then calculate and output the average, the largest number. Call your program YourFirstName_04.py

9. Ask the user to type in an integer (whole number). Do not convert it into an integer as they may accidentally type in a letter by mistake. Loop through each letter and let the user know if they have entered in a valid number in a well formatted output statement. **Hint:** look back at the ASCII value slide from the Selection slide (lesson 5 under topic Selection). The function ord() gives you the ASCII value of a character.

Usage: ord("a") will return 97.

```
>>> ord("a")
97
```